

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233



Robert Flacke
Commissioner

November 19, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

This letter is a review by the New York State Department of Environmental Conservation (DEC) of the Consolidated Edison "Application for Amendment to Operating Licenses" as requested in their letter to you dated December 14, 1978. We have reviewed the requested changes to the Environmental Technical Specification Requirements, specifically section 4.1.2(a) of Appendix B to the operating license, and have discussed our comments with them. We have modified certain sections of the proposed ETSR which we believe would be more appropriate for obtaining information necessary for determining plant impacts.

The DEC does not support the proposed impingement monitoring program presented in section 4.1.2(a) and believes impingement monitoring should continue only slightly modified from that specified in the existing ETSR. The recommended impingement monitoring program is presented in Attachment A to this letter. The existing program provides information on trends in impingement at Indian Point Units 2 and 3 that are standardized and continuous; this should continue. The EPA hearings on cooling mode for lower Hudson River plants are, at present, unresolved and a continuum of impingement data may be important in further consideration of intake modifications. EPA has also stated they will develop effluent guidelines defining "best conventional pollution technology" (BCT) and "best available technology economically achievable" (BATEA) by September 30, 1980 and is recommending all section 402 permits for steam electric plants expire by this date. Since a new 402 permit may include a revised intake design for meeting BCT or BATEA, specified by EPA, a continuation of the data base appears logical. It is also recommended that Con Edison develop a statistically rigorous impingement sampling program for consideration by regulatory agencies after resolution of the Hudson River NPDES hearing conducted by EPA. This program should closely define monthly and annual impingement based upon a reduced sampling schedule.

The DEC recommends that three specific objectives related to impingement be addressed under the Special Studies section (4.1.2a(4)) of the ETSR. These objectives are:

- (1) Evaluate the effectiveness of fixed screens at Indian Point Unit 2 in reducing impingement
- (2) Determine the efficiency of collection of impinged fishes at Indian Point Units 2 and 3.

COO
E-11
ADD:
H. Denton

7911270404

- (3) Evaluate methodologies and intake designs to reduce impingement

Objective 1 (above) will require a temporary exemption from the existing Section 401 Certification fish impingement limitation. This Department is prepared to issue an exemption upon request of the permittee, when provided with the study outline and/or scope of work which specifies dates or period(s) of sampling.

The DEC believes white perch and Atlantic tomcod are very important species in the lower Hudson River ecosystem and should be considered key indicator species along with striped bass. Thus consideration must be given to determining impact of continued station operation on these species. The general ecological survey objectives in Consolidated Edison's proposed ETSR amendment, Section 4.1.2a(1), should include all three species. The objectives presented in this section can be accomplished for white perch and Atlantic tomcod with little additional fieldwork from that proposed - generally requiring only further analysis of field collections and data. Thus the introductory section of Section 4.1.2a of the ETSR should be written as presented below.

4.1.2a(1) General Ecological Survey

Applicability

Applies to measurements taken on striped bass (Morone saxatilis), white perch (M. americanus) and Atlantic tomcod (Microgadus tomcod) in the Hudson River as they interact with plant operation of the once-thru cooling system.

In addition, specific objectives under this section should be changed to reflect the addition of white perch and Atlantic tomcod as important species:

- (ii) determine the status of the striped bass, white perch and Atlantic tomcod spawning stock in the Hudson River
- (iii) determine the size of the fall population of young-of-the year striped bass and white perch in the Hudson River

Other changes should include the following:

Section 4.1.2a(1).A(i) - Adult and Immature Fish

The sampling period for bottom trawling and beach seining should be for the period Mid-July thru November

Section 4.1.2a(1).A(ii) - Spawning Stock Assessment

The paragraph should read:

Using gill nets, haul seines and/or other appropriate gear which may include mark/recapture methodologies, the status of the striped bass, white perch and Atlantic tomcod spawning stock of the Hudson River will be determined each year. The following types of information will be used:

- a) age composition and growth rates
- b) sexual maturation as a function of age, body size and sex
- c) population sex ratios
- d) fecundity
- e) natural survival and mortality rates
- f) an estimate of the relative and absolute population size of striped bass and Atlantic tomcod
- g) an estimate of the relative population size of white perch

Sampling will be of sufficient intensity and duration so as to provide reliable estimates of the status of the spawning population.

Section 4.1.2a(1).A(iii) - the title and paragraph should be rewritten as below:

Fall Striped Bass and White Perch Population Assessment

From August 15 thru November 30 of each year, biweekly sampling using the epibenthic sled will be conducted in shoal areas between at least RM 14 and 77, and upriver as appropriate and necessary to estimate juvenile abundance when data are used in conjunction with that available from the tasks identified in specification 4.1.2a(1).A(i). Other quantitative gear may be employed, in conjunction with the epibenthic sled, to further develop juvenile abundance estimates. The combined data will be used to estimate the general distribution and absolute population sites of striped bass and white perch.

Section 4.1.2a(3) Annual Evaluation of Impact

The Applicability section should be rewritten as follows:

The General Ecological Survey Program and the Impingement Monitoring Program are designed to provide data with which the ecological impact of the Indian Point station on the Hudson River striped bass, white perch, and Atlantic tomcod populations and on other fish populations can continue to be evaluated each year.

The Objective section should be rewritten as follows:

1. Continue to evaluate the impact of operation of the once-through cooling system at the Indian Point station on each year class of striped bass, white perch and Atlantic tomcod.
2. Continue to evaluate the relative impact of operation with the once-through cooling system at the Indian Point station on dominant fish populations (other than those mentioned in (1) above).

The Specification section should be rewritten as follows:

- A. Evaluation of Indian Point Station Impact on other fish populations (other than those mentioned in Objective (1) above)

- (1) Data for selected species collected under specification 4.1.2a(1).A(i) and (ii) (above) will be analyzed for differences in relative abundance among sampling stations in the Indian Point region as well as compared with data collected during preoperational and other previous studies for determination of possible plant operation-induced changes. Statistical analyses of data will be made as appropriate.

B. Evaluation of Indian Point Station Impact on Striped Bass, White Perch and Atlantic Tomcod

- (i) Data collected annually under specifications 4.1.2a(1).A and 4.1.2a(2).A, in conjunction with circulator pump operation data, will be analyzed.
- (ii) Estimates of conditional impingement mortality on the year class of striped bass, white perch and Atlantic tomcod will be made.

In addition, Reporting Requirements of this Section (4.1.2a(3)) should note that the first Annual Impact Evaluation Report will be submitted by December 31, 1981 and all subsequent reports by September 30 of the year following the study.

Further changes in ETSR include the following:

Section 5.6.1.2 Annual and/or Special Environmental Operating Reports

A. Non-Radiological

- The annual report submitted by the permittee should be called the Annual Impact Evaluation Report
- The dates for submission of the Annual Impact Evaluation Report should be as stated above (see comments of Section 4.1.2a(3) - Reporting Requirements)
- Line 5 "...and Special Studies for the prior twelve month interval", should read "...and special studies for the prior calendar year."
- A separate sentence or paragraph concerning reports on Special Studies should be inserted in this section to conform with Section 4.1.2a(4). We recommend: "Results of special ecological studies shall be presented within six (6) months of completion of studies."

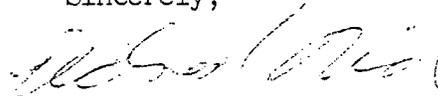
During the past months, the staff of the Department of Environmental Conservation has met with representatives of Consolidated Edison to develop a mutually acceptable ecological monitoring program for the Indian Point station within the framework of NRC Environmental Technical Specification Requirements. The monitoring program is basically Con Edison's submission to the NRC, Application for Amendment to Operating License, Section 4.1.2(a), dated Dec. 14, 1978, plus the modifications to the Application presented in this letter. The

utility is, however, reluctant to support anything but their original Application, yet agrees in principle that the monitoring program mutually developed is acceptable and can be accomplished with meaningful results. The DEC recommends the NRC adopt the ETSR as proposed by Con Edison in their Application for Amendment, with the modifications as presented in this letter. We expect a biological monitoring program included in the upcoming Section 402 permit for the Indian Point station, will be very similar to the program herein recommended.

It should be noted that the Department of Environmental Conservation does not necessarily agree with the reasoning and conclusions presented as "Bases" in sections of the applicant's Attachment C entitled, "Environmental Impact of the Proposed Modifications to the ETSR for Indian Point Units 1, 2, and 3" included in the December 14, 1978 Application for Amendment. We have not presented rewording of these sections since our position is to state the information DEC requires for monitoring of this facility and the NRC should prepare the justification for the program ultimately approved. We will be happy to provide the NRC with our justification for requiring the monitoring program presented in this letter and would like to work with the NRC in developing the necessary modifications to the ETSR.

Thank you for allowing us the time to adequately comment on the proposed ETSR requested by Consolidated Edison. If you have any questions concerning this matter, please contact Mr. John Cianci of my staff at 518-457-5915.

Sincerely,



Eldred Rich
Assistant Commissioner
for Environmental Quality

JMC:db

attachment

ATTACHMENT A

4.1.2a(2) Impingement of Organisms

Applicability

Applies to determining and reporting the number and types of fish species killed by impingement at the site's intake screens and evaluating impingement with respect to the impact on the Hudson River fish populations.

Objectives

The objectives of the impingement studies are to provide:

(i) estimates of numbers and weights of these species of fish killed by impingement on individual intake screens and estimates of the length and weight of striped bass, white perch, and tomcod based on a reasonable subsample.

(ii) initiate corrective action in the event fish impingement exceeds the limits set in the 401 Certification. (Ref. Amendment to the 401 Certification for Indian Point units 1, 2, and 3, dated December 23, 1976.)

(iii) a schedule for reporting of data on fish collected at the intake screens for all units.

(iv) an evaluation of the ecological significance of the effects of fish impingement on population, relative abundance and diversity of the fish in the river.

Specification

A. Impingement Monitoring Program

(i) daily collections shall be taken at each unit by rotating and backwashing each traveling screen for at least 15 minutes. At Unit No. 2, collections shall be taken when the respective fixed screens are raised and backwashed (i.e. at least once per day). Fixed and traveling screen washings are required only when the corresponding circulating pumps are in operation, and prior to routinely removing a pump from operation.

(ii) all fish will be collected from each traveling screen washing at Indian Point on a daily basis. Total numbers, and a statistically appropriate subsample of length and weight of striped bass, white perch, and tomcod will be recorded for each unit daily. Individual counts or sub-samples will be taken of all other species to establish a numbers-weight relationship. An estimate of total numbers shall be derived by recording total weight by species and converting to total numbers using the numbers-weight relationship. For those species selected for subsampling, a representative range of sizes shall be sampled. The fixed screens shall be washed at least once per day. The traveling screens shall be run at the time the fixed screens are raised and back-washed.

(iii) (a) The site-wide limits for collected fish shall be those specified in the State of New York Certificate pursuant to Section 401 of PL92-500 for Indian Point Units 1, 2, & 3, as amended, dated December 23, 1976. The actions required in the event impingement limits are exceeded shall be those specified in the State of New York 401 Certificate for Indian Point Units 1, 2, & 3 as amended. *In as much as these limits and actions are subject to further amendment by the State of New York, the licensee shall notify the NRC within 7 days of receipt of all amendments to the 401 Certificate applicable to this facility.

Administrative Controls of Schedule and Changes

The impingement monitoring shall be conducted throughout the period of once-through cooling operation of Units 1, 2, and 3.

Impingement monitoring programs shall not be terminated without prior review and approval by the Director of Office of Nuclear Reactor Regulation. Changes involving sampling locations, frequency, and methodology shall not be implemented without prior review and approval of the Director of Office of Nuclear Reactor Regulation. Any requested change submitted shall include a thorough documentation of the basis for the proposed change.

Reporting Requirements

(a) If compliance with Specification (iii) requires a power reduction at the facility which results in an emergency need for power* in the licensee's service system, the limits may be exceeded. Under these circumstances, the licensee shall inform the Region 1 Office of Inspection and Enforcement within 24 hours. Within 10 working days after the termination of the emergency power need, the licensee shall submit a report to the Director of Office of Nuclear Reactor Regulation documenting the evidence of an emergency need for power, the reasons for exceeding the limits, and the extent of the environmental impact.

(b) The licensee shall submit to the Region 1 Office of Inspection and Enforcement and a copy to the Director of Office of Nuclear Reactor Regulation by the 10th working day of the following month, a monthly report tabulating the records of fish collections at the Indian Point facility. The report shall include the number, species breakdown, and total weight of each species and all fish combined and describe any corrective action taken to comply with Specification (iii) to keep the fish loss within the limits of the specification.

(c) Records of fish collections and reportable collections in Specifications (ii) and (iii) shall be kept and summarized in monthly reports for inspection and submitted in accordance with (b) above.

(d) The following impingement results will be included in an Annual Impact Evaluation Report:

*As defined in the New York State Certification pursuant to Section 401 of PL92-500 dated December 23, 1976

(1) The ecological significance of the effects of fish impingement on relative abundance, population size of selected species and diversity of the fisheries of the river. Environmental factors such as temperature, river flow, salinity and plant operational variables which influence the extent of fish impingement will be evaluated.

(2) The adequacy of the impingement specification 4.1.2a(2) and need for implementation of any proposed changes.